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Title: Message Packet Logging in
a Distributed Simulation
System

§ Examiner: Silver, David
§ Group/Art Unit: 2128
§ Atty. Dkt. No: 5681-03600

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REPLY BRIEF TO EXAMINER'S ANSWER

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Sir/Madam:

This Reply Brief is filed in Response to the Examiner's Answer mailed on August 11, 2006.

REMARKS

The Examiner's Response to Arguments is itemized as section 10 in the Examiner's Answer, with each paragraph numbered as subsections of section 10. Appellants will use the same numbering in this Reply Brief to refer to sections of the Examiner's Answer.

Section 10.1

Section 10.1 is an informational message regarding multiple rejections for certain claims.

Section 10.2

Section 10.2 is a summary of some of Appellants arguments with regard to the first ground of rejection: claims 1, 20, and 31 and Damani. Appellants note that section 10.2 does not summarize all of Appellants arguments (e.g. the third paragraph on page 5 of the Appeal Brief is not summarized).

Section 10.3

Section 10.3 is the Examiner's answer to Appellants arguments summarized in section 10.2. In section 10.3.1, the Answer asserts that LPs are grouped into clusters, and two LPs could be in two different clusters. The Answer further asserts that the limitation, as recited, requires that there is at least one logging node that is separate from the nodes targeted by the message packets. Given that fact, the Answer asserts that when the message packets are logged by each node, they are inherently not targeted to the other node that is also performing the logging. Appellants disagree that a node that is not targeted by a given message packet logs that given message packet. Rather, each node in Damani only logs the message packets that are targeted at that node. There is simply no teaching, nor even the merest suggestion, in Damani that LPs that are not targeted by a given message packet receive that message packet. Therefore, an LP cannot log a message packet that is not targeted at that LP. For these reasons, Damani fails to teach or even remotely suggest "at least one logging node of the plurality of nodes is configured to log the message packets in one or more log files on at least one non-volatile storage

medium during the simulation, wherein the at least one logging node is separate from nodes targeted by the message packets" as recited in claim 1.

In section 10.3.2, the Answer asserts that the same reasoning applied to claim 1 applies to claims 20 and 31. Appellants respectfully submit that the same rebuttal provided above further illustrates why Damani fails to teach or suggest "logging the message packets in one or more log files on at least one non-volatile storage medium during the simulation by at least one logging node of the plurality of nodes, wherein the at least one logging node is separate from nodes targeted by the message packets", as recited in claim 20 and "instructions which, when executed on a logging node separate from simulation nodes in a distributed simulation system, log, in one or more log files on at least one non-volatile storage medium, message packets transmitted during a simulation between a plurality of simulation nodes" as recited in claim 31.

Section 10.4

Section 10.4 is a summary of some of Appellants arguments with regard to the second ground of rejection: claims 1, 20, and 31 and Ulrich.

Section 10.5

Section 10.5 is the Examiner's answer to Appellants arguments summarized in section 10.4. In section 10.5.1, the Answer refers to the specification page 4, lines 6-9, and notes the electronic system being simulated is referred to as the system under test. Appellants have no quarrel with that assertion. An "electronic system being simulated" is referred to as a "system under test". The issue is that there is no "electronic system being simulated" in Ulrich.

In section 10.5.2, the Answer again asserts that Ulrich's exercise bikes are an electronic system being simulated. Appellants strenuously disagree with this assertion. **An exercise bike is clearly not an electronic system.** No one of any skill in the electrical arts would argue that an exercise bike is an electronic system. An exercise bike is a machine used for exercising. In fact, Ulrich provides real, physical exercise bikes in

his system. See, e.g., Ulrich Fig. 2A. Ulrich simulates a 3D environment in which the users riding the exercise bikes are displayed (see, e.g., Ulrich col. 8, lines 25-40 as quoted in the Examiner's Answer section 10.5.3). It is simply false that there is any relationship between the exercise bikes of Ulrich and an electronic system being simulated. Furthermore, the simulated 3D environment in Ulrich is a simulation of, e.g., an outdoor environment in which the users simulate riding their bikes. This, too, has nothing to do with an electronic system, and thus does not anticipate an electronic system being simulated.

In section 10.5.3, the Answer quotes col. 8, lines 25-40 of Ulrich. In section 10.5.4, the Answer asserts that the permanent copies of the selected 3D environments are stored in non-volatile media, then argues that the 3D environments are message packets. Irrespective of the correctness of the assertion, Ulrich clearly has nothing to do with an electronic system being simulated. Appellants further disagree that Ulrich's pedaling speed, direction, etc. are signal values, as asserted in section 10.5.5.

In section 10.5.6, the Answer asserts that Appellants admitted that the exercise bike is an electronic system. **Appellants most strongly disagree.** Appellants did not admit that exercise bikes are electronic systems, and still do not make such admission. Appellants have consistently asserted that exercise bikes are not electronic systems being simulated. Section 10.5.6 refers to section 10.4.5, which states "Thus, the electronic system is not the system under test, but rather is the system that is performing the simulation (of a pedaled vehicle, such as a bicycle, which is not an electronic system)." Here, Appellants are clearly noting that that the only electronic system in Ulrich is the computer which is performing the simulation of the 3D environment. There is no electronic system being simulated. There is no system under test.

In section 10.5.6, the Answer asserts that the same reasoning applied to claim 1 applies to claims 20 and 31. Appellants respectfully submit that the same rebuttal provided above further illustrates why Ulrich fails to teach or suggest "logging the message packets in one or more log files on at least one non-volatile storage medium

during the simulation by at least one logging node of the plurality of nodes, wherein the at least one logging node is separate from nodes targeted by the message packets", as recited in claim 20 and "instructions which, when executed on a logging node separate from simulation nodes in a distributed simulation system, log, in one or more log files on at least one non-volatile storage medium, message packets transmitted during a simulation between a plurality of simulation nodes" as recited in claim 31.

Section 10.6

Section 10.6 is a summary of Appellants arguments with regard to the second ground of rejection: claims 6 and 25 and Ulrich.

Section 10.7

Section 10.7 is the Examiner's answer to Appellants arguments summarized in section 10.6. In section 10.7.1, the Answer asserts that the hub does log message packets, citing sections 10.5.3 to 10.5.5 of the Answer and further citing Ulrich's col. 11, line 45-49, which states: "If it is an update, the hub records the new state of the user's icon/object (step 170) by referencing an externally or internally maintained object database 172 which contains the location, etc. data on all users in the environment." Appellants respectfully submit, however, that in the embodiment cited by the Examiner, the hub is maintaining the database of the simulated 3D environment, and thus the updates are targeted at the hub. Accordingly, the hub in Ulrich fails to be a logging node as recited in claims 6 and 25 (and as defined in claims 1 and 20, on which claims 6 and 25 depend).

Section 10.8

Section 10.8 is a summary of Appellants arguments with regard to the second ground of rejection: claims 10 and 27 and Ulrich.

Section 10.9

Section 10.9 is the Examiner's answer to Appellants arguments summarized in section 10.8. In section 10.9.1, the Answer asserts that the distributed control node correlates to each machine in Ulrich. Appellants respectfully disagree. As defined on

page 6, lines 8-11, a distributed control node is " a node which is executing a test program or other code which is not part of the system under test, but instead is used to control the simulation, introduce some test value or values into the system under test (e.g. injecting an error on a signal), monitor the simulation for certain expected results or to log the simulation results, etc. " Each machine in Ulrich is not a distributed control node.

Sections 10.10-10.11

These sections note that the arguments with regard to claims 11 and 28 and 13-19 are moot since the claims are allowed.

Section 10.12

Section 10.12 is a summary of Appellants arguments with regard to the fourth ground of rejection: claims 2, 5, 21, 24, 32, 35 and Damani/Stallmo.

Section 10.13

Section 10.13 is the Examiner's answer to Appellants arguments summarized in section 10.12. The Answer repeats the alleged teaching of Stallmo relied on in the rejection in additional detail. Appellants submit that the argument in the Appeal Brief stands and distinguishes these claims over Damani/Stallmo.

Section 10.14

Section 10.14 is a summary of Appellants arguments with regard to the fourth ground of rejection: claims 3, 22, and 33 and Damani/Stallmo.

Section 10.15

Section 10.15 is the Examiner's answer to Appellants arguments summarized in section 10.14. The Answer refers to a different section of Damani than that used in the rejection. Specifically, the Answer refers to Damani's teachings regarding message logging in section 2, paragraph 2. Since those teachings fail to teach or suggest the features in claims 1, 20, and 31, they further fail to teach the combination of features in claims 3, 22, and 33.

Section 10.16

Section 10.16 is a summary of Appellants arguments with regard to the fourth ground of rejection: claims 4, 23, and 34 and Damani/Stallmo.

Section 10.17

Section 10.17 is the Examiner's answer to Appellants arguments summarized in section 10.16. The Answer refers to Stallmo col. 16, lines 21-24: "the target MCU then tests to see whether the data from the rebuilt MCU is next in sequence to be transferred to the host computer 201 (STEP 710)". Appellants respectfully submit that determining if data is to be transferred to the host computer has nothing to do with "the third node is configured to verify that the second node transmits corresponding message packets".

Section 10.18

This section notes that the arguments with regard to the fifth ground of rejection are moot since this ground has been rescinded.

Section 10.19

Section 10.19 is a summary of Appellants arguments with regard to the sixth ground of rejection: claims 29 and 36 and Damani/ANL.

Section 10.20

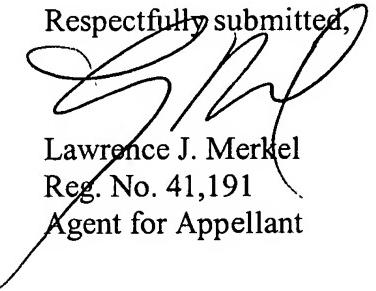
Section 10.20 is the Examiner's answer to Appellants arguments summarized in section 10.16. The Answer asserts that the claims (29 and 36) do not require a previous simulation. Appellants respectfully submit that, for example, claim 29 recites: "reading message packets from the log file which were transmitted to a node simulating a first portion of the system under test during the simulation for transmission to a first node simulating a portion of the system under test in a second simulation including the portion and excluding other portions of the system under test; and transmitting the message packets to the first node". The use of the past tense above clearly illustrates that the simulation (corresponding to the message packets in the log file) is prior to the second

simulation, and thus is a previous simulation. Claim 36 includes similar features.

CONCLUSION

For the foregoing reasons, it is submitted that the remaining rejections are erroneous, and reversal of the rejections is respectfully requested.

The Commissioner is authorized to charge any fees that may be due to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5681-03600/LJM. This Reply Brief is submitted with a return receipt postcard.

Respectfully submitted,

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